

UNIVERSITY OF LONDON
MSc NEUROSCIENCE EXAMINATION

INSTITUTE OF PSYCHIATRY
King's College London

4th March 2013 at 13.30-16.00pm

Addiction Biology

B2 WRITTEN EXAMINATION

Answer FOUR questions only

1. Discuss, quoting research evidence, the importance of glucocorticoids in alcohol dependence.
2. The genes encoding the enzymes ADH and ALDH are functional candidates for alcohol dependence and related disorders; how do they influence the phenotype?
3. Describe two molecular mechanisms of alcohol's action in the brain. What contributes to the complexity of these actions?
4. What is the purpose of biological tests in drug and alcohol treatment settings? In your answer give a rationale for each purpose with appropriate examples.
5. Describe the pharmacokinetic factors which determine the rate that a drug may cross a cellular barrier. How might these factors affect patterns of drug use?
6. Compare and contrast the effects of alcohol and cannabis upon driving performance.
7. Describe the strategy behind the use of partial agonists in the treatment of morphine, cocaine, amphetamine, and nicotine dependence. In your answer include named examples of the clinically-prescribed drugs for each of the abused drugs listed.
8. Describe the mechanism of action, pharmacokinetics and pharmacodynamics of diamorphine. Discuss how methadone is used in the treatment of diamorphine dependence.